

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 12, 14 and 17-26 and 29-56 are pending in the application. Claims 27-28 are canceled; and Claims 12, 45, 49 and 56 are amended by the present amendment. Support for the amended claims can be found in the original specification, claims and drawings.¹ No new matter is presented.

In the outstanding Official Action, Claims 27 and 28 are objected to as in improper dependent form; Claims 12, 14, 17, 18, 23, 26-32, 39-49 and 56 were rejected under 35 U.S.C. 103(a) as unpatentable over Suzuki et al. (U.S. Patent No. 6,452,687, hereinafter “Suzuki”) in view of Ono (JP 2001-194613); Claim 17 was rejected under 35 U.S.C. 103(a) as unpatentable over Suzuki in view of Ono and Kanehashi (JP 11-231240); Claims 33-34 were rejected under 35 U.S.C. 103(a) as unpatentable over Suzuki in view of Ono and Toda (U.S. Pregrant Pub. 2001/0017645); Claims 35-38 were rejected under 35 U.S.C. 103(a) as unpatentable over Suzuki in view of Ono and Azumai et al. (U.S. Patent No. 6,320,682, hereinafter “Azumai”); Claims 19-22 and 24-25 were objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims; and Claims 50-55 are allowed.

Applicant appreciatively acknowledges the indication of allowable subject matter. However, since Applicant considers that amended independent Claim 12 patentably defines over the applied references, Claims 19-22 and 24-25 are presently maintained independent form.

¹ e.g., specification, Figs. 16-17.

The outstanding Official Action objected to Claims 27 and 28 for being in improper form for failing to further limit the subject matter of independent Claim 12. In response, Claims 27 and 28 are canceled thereby rendering the rejection thereto moot.

Claims 12, 14, 17, 18, 23, 26-40 and 56 were rejected under 35 U.S.C. 103(a) as unpatentable over Suzuki in view of Ono. Applicant respectfully submits that amended independent Claims 12, 45, 49 and 56 state novel features clearly not taught or rendered obvious by the applied references.

Independent Claim 12 is amended to recite a light scanning device, comprising:

...scanning line inclination correcting means for entirely tilting the optical element around a supporting point positioned at a center of the optical element along the scanning line to correct an inclination of the scanning line, *wherein the supporting point is positioned near an optical axis of the optical element and is in contact with a center of the holding member in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element...*

Amended independent Claims 45, 49 and 56 recite substantially similar features, but are directed to alternative embodiments. Therefore, the arguments presented below apply to each of Claims 1, 45, 49 and 56.

Turning to the primary reference, Figs 9 and 10 of Suzuki show a scanning line inclination correcting mechanism that tilts the holding member (14) by moving the adjusting member (15). The adjusting member (15) is positioned at one edge of the holding member (14) in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element, in order to correct the inclination of the diffracting optical element (10C). Also, the holding member (14) is arranged to be in contact with the adjusting members (15/16), which are positioned at the left-side and right-side edges of the holding member (14).

However, Suzuki fails to teach or suggest that *the supporting point is positioned near an optical axis of the optical element and is in contact with a center of the holding member*

in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element, as recited in amended independent Claim 12.

Specifically, since the contact points between the holding member (14) and the adjusting members (15/16) are relatively distant from the optical axis of the optical element (10C), an increase in the amount of the inclination correction causes an increase in the deviation of the optical axis height, which degrades the optical performance of the light scanning device of Suzuki. In other words, the scanning line inclination can be corrected by the movement of the adjusting member (15), but the scanning line curve characteristic will worsen because the center of the optical element (10A) is also moved in the sub-scanning direction together with the body chassis (8).

In contrast, in an exemplary non-limiting embodiment, as depicted in Figs. 16-17 of the present specification, the rolling member (1093) serves as a support point of the inclination correction, and the contact point between the rolling member (1093) and the holding member (1061) acts as this supporting point and is positioned at the center of the second scanning lens (1030) in the direction A (along the scanning line). The contact point between the rolling member (1093) and the holding member (1061) is positioned near the optical axis of the optical element (the second scanning lens 1030) and is in contact with the center of the holding member (1061) in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element (the second scanning lens 1030). Thus, the leaf spring (1095) rotates the second scanning lens (1030) and the scanning line curve correcting means (1071) in the counterclockwise direction, and the inclination of the second scanning lens (1030) is corrected around the rolling member (1093) by the rotation of the stepping motor (1090), without causing the deviation of the optical axis height. Thus, utilizing the above noted claimed configuration, it is possible to prevent the degradation of the optical performance as discussed in relation to Suzuki.

Therefore, it is submitted that the scanning line inclination correction apparatus, as recited in amended independent Claim 12 is patentably distinct from Suzuki. Specifically, Suzuki fails to teach or suggest that *the supporting point* (of the scanning line inclination correcting means) *is positioned near an optical axis of the optical element and is in contact with a center of the holding member in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element*, as recited in amended independent Claim 12.

The outstanding Official Action admits that Suzuki fails to teach or suggest the holding member including a supporting member and the claimed features thereof, as recited in amended Claim 12. To cure this deficiency in Suzuki the Official Action relies on Ono. However, as discussed above with respect to Suzuki, Ono also fails to teach or suggest that *the supporting point* (of the scanning line inclination correcting means) *is positioned near an optical axis of the optical element and is in contact with a center of the holding member in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element*, as recited in amended independent Claim 12..

Accordingly, Applicant respectfully requests the rejection of independent Claim 12 under 35 U.S.C. § 103 be withdrawn. For substantially the same reasons given with respect to amended Claim 12, it is also submitted that amended independent Claims 45, 49 and 56 patentably define over Suzuki and/or Ono.

As discussed above, neither Suzuki nor Ono, neither alone nor in combination, teach or suggest the above differentiated features recited in amended independent Claims 12, 45, 49 and 56 . Likewise, none of Kanehashi, Toda, nor Azumai remedy this deficiency, and therefore, none of the cited references, neither alone nor in combination, teach or suggest Applicant's Claims 17, 33-34 and 35-38 which include the above-distinguished limitations by

Application No. 10/665,287
Reply to Office Action of November 25, 2005

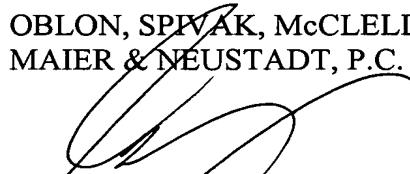
virtue of dependency. Therefore, the applied references fail to provide a *prima facie* case of obviousness with regard to any of these claims.

Accordingly, Applicant respectfully requests the rejection of Claims 17, 33-34 and 35-38 under 35 U.S.C. § 103 be withdrawn.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 12, 14 and 17-26 and 29-56 is patentably distinguishing over the applied references. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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